pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

31.8333333Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0096733**
Facility Type	**Non-Municipal**	APS ID	**1013620**
Major / Minor	**Minor**	Authorization ID	**1309361**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Maheep Goyal**	Facility Name	**Pleasant View MHP STP**
Applicant Address	240 Mingo Road	Facility Address	Indian Creek Valley Road
	Royersford, PA 19468		Melcroft, PA 15462
Applicant Contact	Maheep Goyal	Facility Contact	Maheep Goyal
Applicant Phone	(610) 792-9396	Facility Phone	(610) 792-9396
Client ID	342295	Site ID	256454
Ch 94 Load Status	Not Overloaded	Municipality	Saltlick Township
Connection Status	No Limitations	County	Fayette
Date Application Received	March 18, 2020	EPA Waived?	Yes
Date Application Accepted	March 24, 2020	If No, Reason	

Purpose of Application: Renewal of an existing NPDES permit for the discharge of treated sewage.

Summary of Review

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Jonathan P. Peterman* Jonathan P. Peterman / Project Manager	March 24, 2021
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	March 25, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.024
Latitude	40º 3' 31.24"	Longitude	-79º 21' 58.77"
Quad Name	Seven Springs	Quad Code	1811
Wastewater Description:	Sewage Effluent		
Receiving Waters	Indian Creek (HQ-CWF)	Stream Code	38235
NHD Com ID	69915897	RMI	17.6
Drainage Area	31.8	Yield (cfs/mi^2)	0.16
Q_{7-10} Flow (cfs)	**5.13**	Q_{7-10} Basis	Youghiogheny River at Connellsville, PA Gage No. 3082500
Elevation (ft)	1,440	Slope (ft/ft)	
Watershed No.	19-E	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	NORTH FAYETTE CNTY MUNI AUTH		
PWS Waters	YOUGHIOGHENY RIVER	Flow at Intake (cfs)	
PWS RMI	47.14	Distance from Outfall (mi)	27

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. A Q_{7-10} analysis was conducted using a downstream stream gage (3082500) as the reference stream gage. The Q_{7-10} calculations, which are attached in Appendix A.

Other Comments: Attaining Use(s) however a 1997 survey by DEP's Aquatic Biologist determined the discharge is in a segment of stream impacted by mine drainage.

Treatment Facility Summary

Treatment Facility Name: Pleasant View MHP STP

WQM Permit No.	Issuance Date	Comments
2672406 A-3	5/18/2018	Transfer
2672406 A-2	1/1/2010	Transfer
2672406 A-1	6/18/1998	Transfer
2672406	2/6/1973	Initial Construction

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Septic Tank Sand Filter	Hypochlorite	0.01

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.024	40	Not Overloaded	Dewatering	Landfill

Treatment System Components for Outfall 001:
- One (1) Bar screen.
- One (1) Equalization tank.
- Two (2) Submersible grinder pumps.
- One (1) Aeration tank.
- One (1) Clarifier.
- One (1) RAS Line.
- One (1) Skimmer.
- One (1) Erosion chlorinator.
- One (1) Chlorine contact tank.
- One (1) Outfall 001.

- One (1) Sludge Holding tank.

Sludge use and disposal description and location(s): Landfill

Changes Since Last Permit Issuance: None.
Other Comments: None.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

TMDL Impairment

The Department's Geographical Information System indicates that there are no associated TMDLs for Indian Creek and the stream is not impaired. No further TMDL review is required.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.024	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	Report	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

*The existing effluent limits for Outfall 001 were based on a design flow of 0.024 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.024
Latitude 40° 3' 18.00" **Longitude** 79° 21' 58.00"
Wastewater Description: Treated domestic sewage

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the Toxic Screening Analysis Spreadsheet.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
The model was run using the latest information on Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. The existing technology-based effluent limits for $CBOD_5$ (25 mg/l) and NH3-N (25 mg/l). The DO minimum daily average criterion from §93.7 (6.0 mg/L for CWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	25	50	N/A
Dissolved Oxygen	N/A	N/A	3

The model indicated that the effluent limits for ammonia-nitrogen, CBOD5, and dissolved oxygen as shown above are still protective of water quality. These limits will remain.

Best Professional Judgment (BPJ) Limitations

See the Dissolved Oxygen section below.

Additional Considerations

None

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst the abovementioned technology, water quality, and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.024	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	XXX	XXX	0.02	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	Report	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.024 MGD.

Effluent Limit Determination for Outfall 001

General Information

The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain.

Flow

Reporting of the daily maximum flow is consistent with monitoring requirements for other treatment plants and will remain.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The results of the WQM 7.0 model show that the previously applied effluent limits for $CBOD_5$ are protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH.

Total Residual Chlorine (TRC)
Under the authority of 25 Pa. Code § 93.4c, the use of chlorine for disinfection will generally not be authorized special protection watersheds. Given that the use of chlorine is approved, the average monthly effluent limitation will be set to 0.02 mg/l ("non-detect") and the associated Part C language will be used. Current policy dictates that the average monthly MDL in NPDES permits for TRC should be specified as 0.02 mg/L, which is believed to be reasonable for standardized TRC methods. A compliance schedule will be required for the permittee to meet this effluent limitation.

Fecal Coliforms
The existing fecal coliform limits with I-max limits were previously updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5). The existing effluent limits will remain.

Ammonia-Nitrogen (NH3-N)
The results of the WQM 7.0 model show that the existing monitoring requirements for ammonia-nitrogen are appropriate and will remain.

Dissolved Oxygen (DO)
25 PA Code §93.7 provides specific water quality criteria for DO and monitoring for this parameter will ensure that the facility is not creating or contributing to an in-stream excursion below these water quality standards. The existing limit will remain.

Additional Considerations
A once a year M&R requirement for Total N and Total P is imposed on this facility as per Chapter 92.a.61.

Compliance History

Summary of Inspections -The most recent Clean Water Program onsite inspection for this facility was a Compliance Evaluation Inspection on 10/21/20. Effluent violations were noted on the inspection but the facility was operating properly.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed no open violations.

eDMRs Summary - Upon review of the eDMR's, the facility has generally been in compliance with the existing effluent limits.

Compliance History

DMR Data for Outfall 001 (from January 1, 2020 to December 31, 2020)

Parameter	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20
Flow (MGD) Average Monthly	0.0015	0.0015	0.0026	0.0015	0.0012	0.0019	0.0015	0.0027	0.0029	0.0058	0.0049	0.0047
pH (S.U.) Instantaneous Minimum	6.8	7.1	7.0	7.1	7.1	6.8	6.8	6.6	6.4	6.7	7.0	6.9
pH (S.U.) Instantaneous Maximum	7.3	7.8	7.7	7.8	7.6	7.6	7.3	7.0	7.1	7.3	7.8	7.4
DO (mg/L) Instantaneous Minimum	7.7	8.0	5.8	7.0	6.1	6.0	7.0	7.2	7.6	8.3	8.1	6.2
TRC (mg/L) Average Monthly	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3
TRC (mg/L) Instantaneous Maximum	1.0	0.5	0.3	0.3	1.4	0.5	0.4	0.6	0.7	0.6	0.9	0.7
CBOD5 (mg/L) Average Monthly	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	< 2.0	< 4.0	3.0	3.0	6.0
CBOD5 (mg/L) Instantaneous Maximum	4.0	< 2.0	< 2.0	2.0	< 2.0	< 2.0	18.0	< 2.0	6.0	3.0	3.0	9.0
TSS (mg/L) Average Monthly	10.0	6.0	9.0	5.0	7.0	8.0	11.0	10.0	22.0	9.0	7.0	7.0
TSS (mg/L) Instantaneous Maximum	12.0	6.0	10.0	6.0	8.0	8.0	13.0	10.0	33.0	10.0	8.0	8.0
Fecal Coliform (No./100 ml) Geometric Mean	39.85	12.7	15.1	3.1	9.2	8.3	7.06	1.8	9.5	592.1	130.2	45.9
Fecal Coliform (No./100 ml) Instantaneous Maximum	387.3	160.7	228.2	3.1	27.2	11.0	16.1	3.1	14.5	1016.6	1413.6	55.6
Ammonia (mg/L) Average Monthly	< 0.12	< 0.10	0.22	< 0.11	< 1.3	< 0.10	< 0.10	0.61	< 0.11	1.2	< 0.10	0.13
Ammonia (mg/L) Instantaneous Maximum	0.13	< 0.10	0.34	0.11	2.50	< 0.10	< 0.10	0.74	0.12	1.8	0.10	0.15

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment **C**)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

APPENDIX A

Q_{7-10} ANALYSIS AND STREAM DATA

USGS
science for a changing world

Prepared in cooperation with the Pennsylvania Department of Environmental Protection

Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Open-File Report 2011–1070

U.S. Department of the Interior
U.S. Geological Survey

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi^2, square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi^2)	Regulated[1]
03070000	Cheat River at Rowlesburg, W.Va.	39.346	-79.665	939	N
03070420	Stony Fork Tributary near Gibbon Glade, Pa.	39.764	-79.587	.93	N
03070500	Big Sandy Creek at Rockville, W.Va.	39.616	-79.705	200	N
03072000	Dunkard Creek at Shannopin, Pa.	39.759	-79.971	229	N
03072655	Monongahela River near Masontown, Pa.	39.825	-79.923	4,440	Y
03072840	Tenmile Creek near Clarksville, Pa.	39.998	-80.042	133	N
03073000	South Fork Tenmile Creek at Jefferson, Pa.	39.923	-80.073	180	N
03074300	Lick Run at Hopwood, Pa.	39.868	-79.694	3.80	N
03074500	Redstone Creek at Waltersburg, Pa.	39.980	-79.764	73.7	N
03075070	Monongahela River at Elizabeth, Pa.	40.262	-79.901	5,340	Y
03075500	Youghiogheny River near Oakland, Md.	39.422	-79.424	134	N
03076500	Youghiogheny River at Friendsville, Md.	39.654	-79.408	295	LF
03076600	Bear Creek at Friendsville, Md.	39.656	-79.394	48.9	N
03077500	Youghiogheny River at Youghiogheny River Dam, Pa.	39.805	-79.364	436	Y
03078000	Casselman River at Grantsville, Md.	39.702	-79.136	62.5	N
03078500	Big Piney Run near Salisbury, Pa.	39.726	-79.048	24.5	N
03079000	Casselman River at Markleton, Pa.	39.860	-79.228	382	N
03080000	Laurel Hill Creek at Ursina, Pa.	39.820	-79.321	121	N
03081000	Youghiogheny River below Confluence, Pa.	39.828	-79.373	1,029	Y
03082200	Poplar Run near Normalville, Pa.	40.016	-79.426	9.27	N
03082500	Youghiogheny River at Connellsville, Pa.	40.018	-79.594	1,326	Y
03083000	Green Lick Run at Green Lick Reservoir, Pa.	40.105	-79.500	3.07	N
03083500	Youghiogheny River at Sutersville, Pa.	40.240	-79.806	1,715	Y
03084000	Abers Creek near Murrysville, Pa.	40.450	-79.714	4.39	N
03085000	Monongahela River at Braddock, Pa.	40.391	-79.858	7,337	Y
03085500	Chartiers Creek at Carnegie, Pa.	40.401	-80.096	257	N
03086000	Ohio River at Sewickley, Pa.	40.549	-80.206	19,500	Y
03086500	Mahoning River at Alliance, Ohio	40.933	-81.095	89.2	N
03090500	Mahoning River bl Berlin Dam nr Berlin Center, Ohio	41.048	-81.001	248	Y
03091500	Mahoning River at Pricetown, Ohio	41.131	-80.971	273	Y
03092000	Kale Creek near Pricetown, Ohio	41.140	-80.995	21.9	N
03092090	West Branch Mahoning River near Ravenna, Ohio	41.161	-81.197	21.8	N
03092460	West Branch Mahoning River at Wayland, Ohio	41.157	-81.072	81.7	Y
03092500	West Branch Mahoning River near Newton Falls, Ohio	41.172	-81.021	96.3	Y
03093000	Eagle Creek at Phalanx Station, Ohio	41.261	-80.954	97.6	N
03094000	Mahoning River at Leavittsburg, Ohio	41.239	-80.881	575	Y
03095500	Mosquito Creek below Mosquito Creek Dam near Cortland, Ohio	41.300	-80.758	97.5	Y
03097550	Mahoning River at Ohio Edison P Plt at Niles, Ohio	41.173	-80.757	854	Y
03098000	Mahoning River at Youngstown, Ohio	41.111	-80.673	898	Y
03098500	Mill Creek at Youngstown, Ohio	41.072	-80.690	66.3	N
03098600	Mahoning River below West Ave at Youngstown, Ohio	41.105	-80.663	978	Y
03099500	Mahoning River at Lowellville, Ohio	41.037	-80.536	1,073	Y
03100000	Shenango River near Turnersville, Pa.	41.513	-80.471	152	N
03101500	Shenango River at Pymatuning Dam, Pa.	41.498	-80.460	167	Y
03102000	Shenango River near Jamestown, Pa.	41.458	-80.425	181	Y

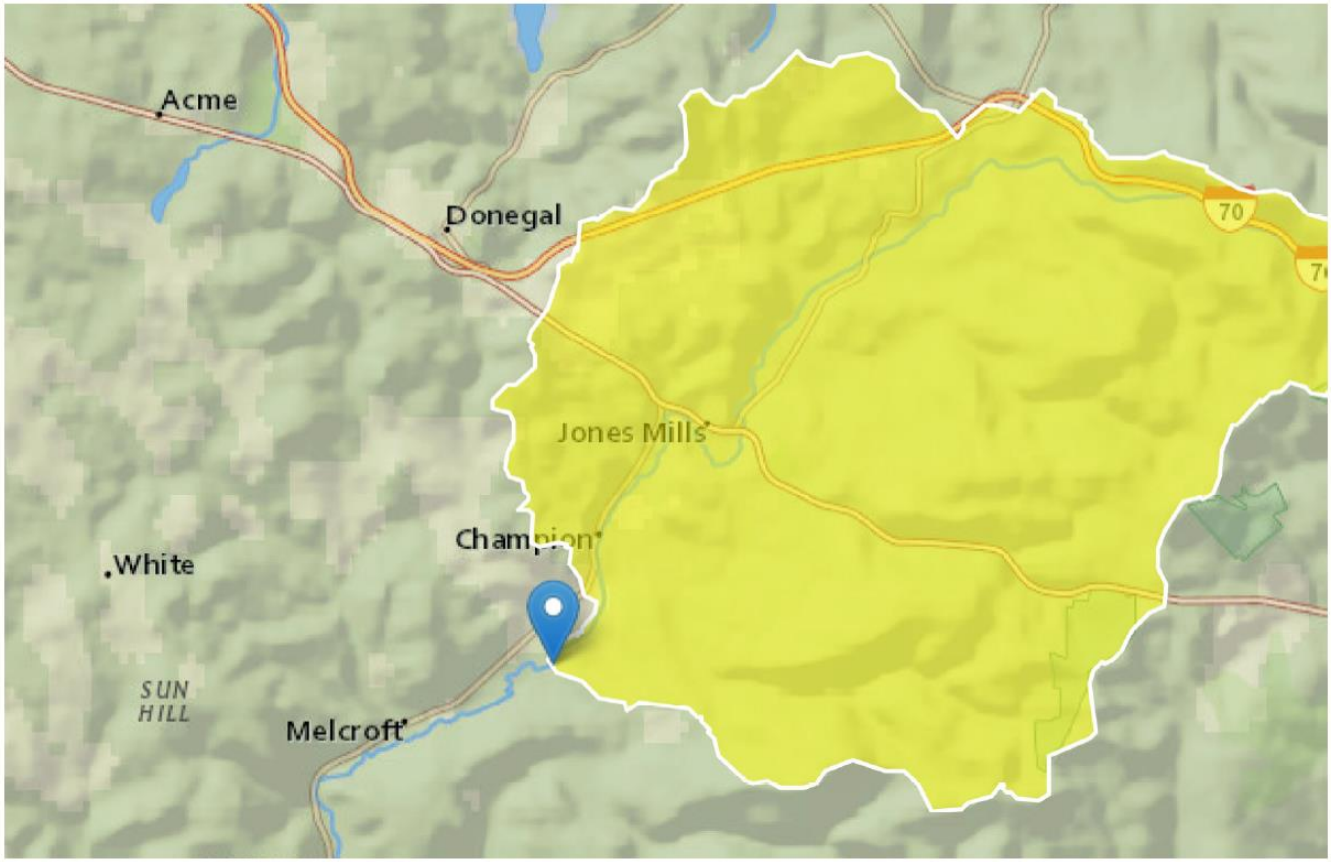
Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft^3/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft^3/s)	7-day, 10-year (ft^3/s)	7-day, 2-year (ft^3/s)	30-day, 10-year (ft^3/s)	30-day, 2-year (ft^3/s)	90-day, 10-year (ft^3/s)
03044000	[3]1941–1951	11	266	277	350	293	402	391
03045000	1941–2008	68	2.2	3.2	12.9	6.3	22.2	14.8
03045500	1921–1940	17	11.6	17.0	35.5	23.0	49.6	32.4
03047000	1943–1991	49	1.7	9.8	43.5	29.0	55.2	47.6
03047500	1909–1937	29	141	155	335	190	412	276
03048500	[2]1943–2008	66	182	232	385	307	496	392
03049000	1942–2008	67	3.2	3.8	8.5	5.7	13.5	9.4
03049500	[2]1967–2008	42	1,950	2,390	3,490	2,860	4,420	3,510
03049500	[3]1940–1965	26	1,030	1,200	1,600	1,380	2,000	1,850
03049800	1964–2008	45	<.1	<.1	.2	.1	.5	.3
[5]03061500	1909–2008	83	.6	1.0	3.7	1.9	6.7	4.6
03062400	1966–2002	33	0	0	.1	<.1	.5	.1
03062500	1947–2008	28	.7	1.1	3.0	1.8	4.8	3.3
[5]03065000	1942–2008	64	10.4	12.4	34.8	20.7	64.0	54.9
[5]03066000	1923–2008	86	4.0	5.1	11.6	7.6	19.4	16.5
03068800	1975–2008	17	12.0	15.4	32.8	26.0	57.7	53.6
[5]03069000	1912–1993	67	9.1	11.6	37.6	21.0	67.6	59.6
[5]03069500	1914–2008	95	31.8	37.6	98.3	60.2	178	146
[5]03070000	1925–1996	72	35.8	40.2	114	66.8	209	173
03070420	1979–1995	17	0	<.1	<.1	<.1	.1	.1
[5]03070500	1911–2008	94	2.3	2.9	13.2	5.5	22.9	14.8
03072000	1942–2008	67	1.2	1.7	5.4	2.7	9.5	5.7
03072655	1940–2008	69	295	484	845	618	1,150	944
03072840	1970–1979	10	1.9	2.7	5.5	4.9	9.2	9.3
03073000	1933–1995	63	.3	.4	1.8	1.0	4.0	2.8
03074300	1969–1979	11	<.1	.1	.2	.2	.4	.4
03074500	1944–2008	65	8.5	10.2	18.7	13.0	23.3	17.8
03075070	1935–2008	74	354	512	908	688	1,220	1,060
[4]03075500	1943–2008	66	5.4	6.3	16.2	10.0	25.2	18.2
[4]03076500	[2]1941–2008	67	19.9	48.0	83.2	67.6	117	98.0
[4]03076600	1966–2008	43	2.6	3.0	6.2	4.1	8.4	6.5
03077500	1945–1991	47	15.6	24.6	162	132	288	292
[4]03078000	1949–2008	60	1.2	1.6	5.0	2.8	8.4	5.6
03079000	1922–2008	87	16.4	18.4	37.5	24.8	56.3	43.0
03080000	1920–2008	89	3.9	5.1	12.1	8.4	20.6	15.6
03081000	1942–2008	67	240	283	535	358	644	518
03082200	1963–1978	16	0	.1	.4	.2	.7	.5
03082500	[2]1926–2008	83	155	214	526	283	655	460
03082500	[3]1910–1924	13	23.0	30.8	129	53.6	208	144
03083000	1943–1979	37	.1	.1	.2	.1	.3	.2
03083500	[2]1926–2008	74	262	332	644	416	776	621
03084000	1951–1994	44	0	<.1	.2	.2	.5	.3
03085000	1940–2004	65	1,060	1,230	1,950	1,440	2,380	1,950
03085500	1921–2008	80	26.7	30.8	52.4	36.5	62.4	48.5
03086000	1935–2008	74	2,760	3,060	5,030	3,650	6,230	4,930

StreamStats Report

Region ID: PA
Workspace ID: PA20210226140612460000
Clicked Point (Latitude, Longitude): 40.05894, -79.36564
Time: 2021-02-26 09:06:29 -0500



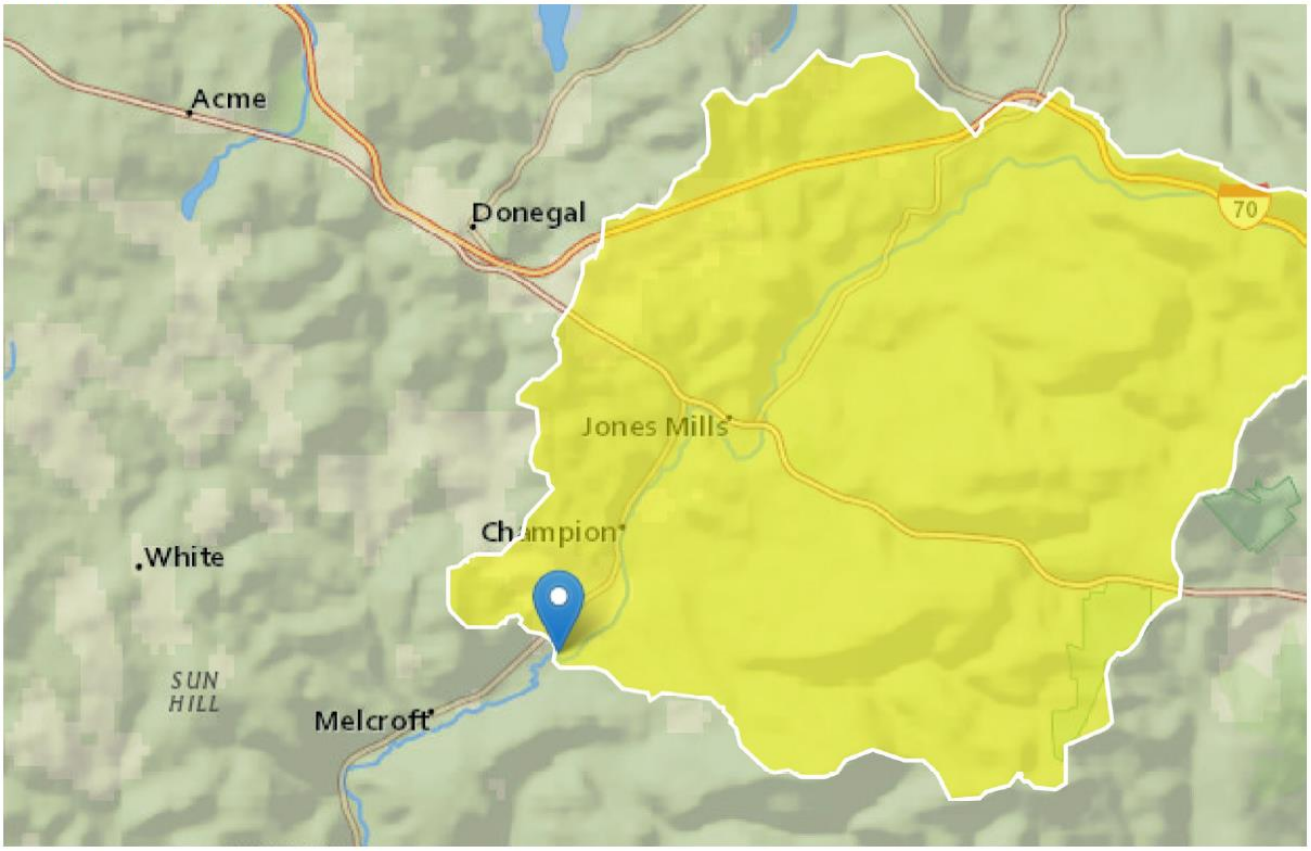
Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	31.8	square miles
ELEV	Mean Basin Elevation	2124	feet

Low-Flow Statistics Parameters[100 Percent (31.8 square miles) Low Flow Region 4]

StreamStats Report

Region ID: PA
Workspace ID: PA20210226140757400000
Clicked Point (Latitude, Longitude): 40.05922, -79.36882
Time: 2021-02-26 09:08:13 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	32.9	square miles
ELEV	Mean Basin Elevation	2107	feet

Low-Flow Statistics Parameters[100 Percent (32.9 square miles) Low Flow Region 4]

Q_{7-10} Analysis

Facility:	Maheep Goyal	**NPDES Permit No.:**	PA0096733
Outfall:	001	**RMI at Outfall:**	17.6 Elev. 1440

Reference Stream Gage Information	
Stream Name	Youghiogheny River
Reference Gage	3082500
Station Name	Youghiogheny River at Connellsville, PA
Gage Drainage Area (sq. mi.)	1326
Q_{7-10} at gage (cfs)	214
Yield Ratio (cfs/mi^2)	0.1614

Was Ecoflows Used?	No
Correlation From Ecoflows	

Check Dilution Ratio		
Discharge at Outfall (wf) (mgd)	0.024	
	sf (cfs)	wf (cfs)
Dilution Ratio = sf/wf	5.1321	0.03713349
Dilution Ratio =	138.2074966 to 1	

Q_{7-10} at Outfall	
Drainage Area at site (sq. mi.)	31.8
Q_{7-10} at discharge site (cfs)	5.1321
Q_{7-10} at discharge site (mgd)	3.3170
Low Flow Yield Ratio of 0.1 cfs/mi^2 (For Approx. Comparison Only)	
Q_{7-10} at discharge site (cfs)	3.1800
Q_{7-10} at discharge site (mgd)	2.0553

Q_{7-10} at Downstream Reach #1	
Drainage Area at Reach (sq. mi.)	32.9
RMI	18.5
Q_{7-10} at reach (cfs)	5.3097
Q_{7-10} at reach (mgd)	3.4317
Elev. 1432	

Q_{7-10} at Downstream Reach #2	
Drainage Area at Reach (sq. mi.)	[Drainage Area @ Reach #2]
RMI	[RMI @ Reach #2]
Q_{7-10} at reach (cfs)	#VALUE!
Q_{7-10} at reach (mgd)	#VALUE!

Q_{7-10} at Downstream Reach #3	
Drainage Area at Reach (sq. mi.)	[Drainage Area @ Reach #3]
RMI	[RMI @ Reach #3]
Q_{7-10} at reach (cfs)	#VALUE!
Q_{7-10} at reach (mgd)	#VALUE!

Basin Characteristics Report at [Site / Reach]

Basin Map at Outfall

[Insert Drainage Area Map from Stream Stats]

APPENDIX B

WQM 7.0 MODEL RESULTS

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**18.500**	1440.00	31.80	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	5.13	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Maheep Goyal	PA0096733	0.0240	0.0240	0.0240	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
18.500	5.13	0.00	5.13	.0371	0.00168	.681	33.73	49.52	0.22	0.245	20.04	7.00
Q1-10 Flow												
18.500	3.54	0.00	3.54	.0371	0.00168	NA	NA	NA	0.18	0.300	20.05	7.00
Q30-10 Flow												
18.500	6.87	0.00	6.87	.0371	0.00168	NA	NA	NA	0.26	0.208	20.03	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.69	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.34	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
18.500	Maheep Goyal	9.64	50	9.64	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
18.500	Maheep Goyal	1.91	25	1.91	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
18.50	Maheep Goyal	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
18.500	0.024	20.036	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
33.726	0.681	49.516	0.225
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.17	0.105	0.18	0.702
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.205	3.601	Tsivoglou	6
Reach Travel Time (days)			
0.245			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.024	2.16	0.18	8.24
0.049	2.15	0.17	8.24
0.073	2.15	0.17	8.24
0.098	2.14	0.17	8.24
0.122	2.14	0.16	8.24
0.147	2.13	0.16	8.24
0.171	2.13	0.16	8.24
0.196	2.12	0.16	8.24
0.220	2.12	0.15	8.24
0.245	2.11	0.15	8.24

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
18.500	Maheep Goyal	PA0096733	0.024	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

APPENDIX C

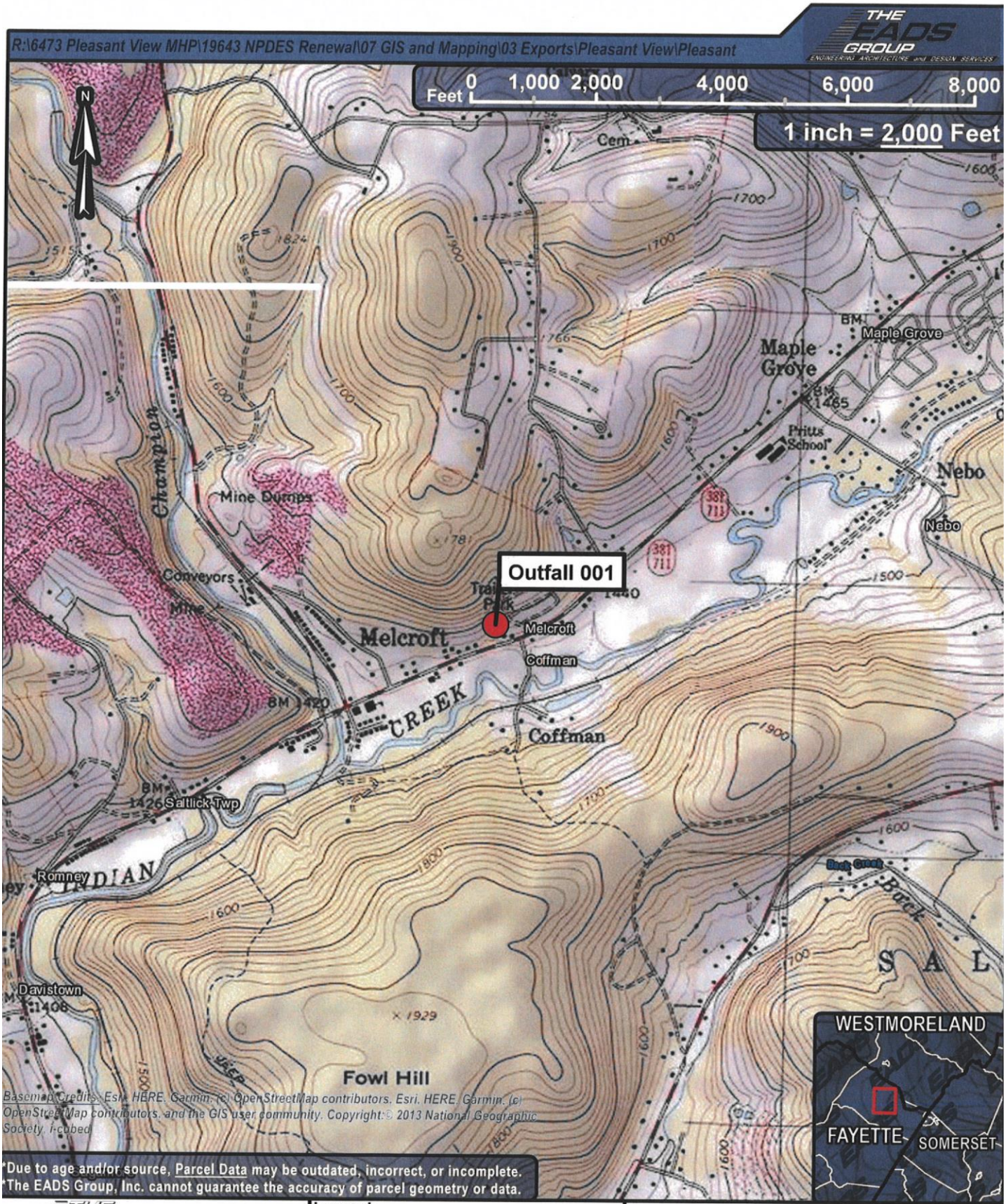
TRC ANALYSIS SPREADSHEET

1A	B	C	D	E	F	G
2	**TRC EVALUATION**	Maheep Goyal PA0096733				
3	Input appropriate values in B4:B8 and E4:E7					
4	5.13	= Q stream (cfs)		0.5	= CV Daily	
5	0.024	= Q discharge (MGD)		0.5	= CV Hourly	
6	20	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc =	44.095	1.3.2.iii	WLA cfc = 42.982
12	PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc=	16.431	5.1d	LTA_cfc = 24.988
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT =	1.288		
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.500	BAT/BPJ	
18			INST MAX LIMIT (mg/l) =	1.563		

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...**
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...**
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**

APPENDIX D

FACILITY MAP AND SCHEMATIC



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Legend:

Outfall Location 001

Pleasant View MHP

Date: 2/12/2020
Revised: 2/12/2020
Drawn By: B.J.D.
Checked By: B.J.D.